Prophylactic Endoscopic Sphincterotomy for Prevention of Postoperative Bile Leak in Hydatid Liver Disease: A Randomized Controlled Study

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- Bile leak is the main cause of morbidity and mortality after surgery for hydatid liver cysts
- the aim of our prospective study is to assess the role of preoperative prophylactic endoscopic sphincterotomy in reducing bile leak rates in patients undergoing partial cystectomy for hydatid liver disease versus those without endoscopic sphincterotomy.

Patients and Methods

All patients presenting to our department from January 2015 till September 2017 with diagnosis of hepatic hydatid disease were discussed in weekly multidisciplinary meeting and assessed for eligibility to participate in the study.

Inclusion criteria included patients presenting with uncomplicated hydatid liver cysts, with a diameter of 10 cm or more, with cyst type, including type 2, type 3, symptomatic type 4, or with viable content on ultrasound basis. Exclusion criteria were patients with cholangitis, elevated serum bilirubin, history of surgical or medical intervention for hydatid disease, patients presenting to the emergency department with complicated hydatid disease, and patients who will undergo liver resection or percutaneous surgery.

Fifty-four patients with hepatic hydatid cyst met inclusion criteria, 27 were excluded or declined to participate. Twenty-six women and 28 men (mean age 44.6 – 10.1, range: 22–61 years) were randomly assigned to either group I with ES (n = 27) or group II without ES (n = 27).

The primary endpoint was the occurrence of postoperative bile leak. The diagnosis of the bile leak was made through the drainage results from the drain placed at surgery. Postoperative bile leak was defined as ongoing bilious drainage of any amount through the drainage tube lasting for more than 2 days. The secondary endpoints were duration of postoperative hospital stay, mortality, and morbidity classified according to the Clavien–Dindo classification.

Results:

Demographics and clinical, laboratory, and radiological characteristics of cysts were not statistically different between two groups. Group I had a significant decrease in bile leak rate compared with group II (11.1% versus 33.3%, P = . 013), with significantly shorter duration of hospital stay (P < . 0001). Biliary fistula in group I had a significantly higher need for biliary intervention through endoscopic sphincterotomy.

In conclusion, prophylactic ES before partial cystectomy of hydatid liver cyst provides a significant reduction in postoperative biliary fistula, daily fistula output, shorter time to fistula closure without intervention, and a significant reduction in duration of hospital stay than patients without ES.